



Promoting environmental literacy in Malaysian society - Challenges and opportunities

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ABSTRAK

Pengurusan alam sekitar sebetulnya amat berkaitan dengan pengurusan manusia dari aspek perlakuannya terhadap alam sekitar. Perlakuan yang baik terhadap alam sekitar dapat dibina melalui literasi alam sekitar. Literasi alam sekitar beroperasi dalam satu kontinuum bermula dengan pengetahuan, diikuti oleh sikap yang akhirnya diterjemahkan dalam bentuk perlakuan. Kertas ini membincangkan kepentingan literasi alam sekitar dalam membina masyarakat Malaysia yang peka terhadap alam sekitar. Perbincangan tertumpu kepada aspek peluang dan cabaran dalam membentuk masyarakat tersebut.



INTRODUCTION



The 1972 United Nations Conference on Human Environment (UNCHE) is one of the remarkable events in the history of global environmental awareness. UNCHE emphasized on the interrelationship between the well being of environment and human. The first principle of UNCHE Declaration stated that 'man has fundamental right to freedom, equality and adequate conditions of life, in an environment of quality that permits a life of dignity and well being, and he bears solemn responsibility to protect and improve the environment for present and future generations' (EPSM 1982). This sentiment was repeated in the 1992 United Nations Conference on Environment and Development (UNCED), with a call for citizen participation in handling environmental issues. Principle 10 of UNCED proclaimed that 'environmental issues are best handled with the participation of all concerned citizens, at all relevant level. At the national level, each individual shall have appropriate access to information concerning the environment that is held by public authorities, including information on hazardous materials and activities in their communities, and the opportunity to participate in decision making processes. The state shall facilitate and encourage public awareness and participation by making information widely



available. Effective access to judicial and administrative proceedings, including redress and remedy, shall be provided' (Tolba 1992).

A more recent milestone in global commitment towards environmental well being was the Johannesburg Summit 2002. The Summit witnessed the participation from all sectors of society - representatives from governments, business and industries, children and youth, farmers, indigenous people, local authorities, non-governmental organizations, scientific and technological communities, women, workers and also trade unions. The main target of the Summit was to promote action. The major outcome document, i.e. Plan of Implementation, contains targets and timetables to spur action on a wide range of issues. These include the phasing out of toxic chemicals by 2005, and halving the proportion of people who lack access to clean water or proper sanitation, restoring depleted fisheries and preserving biodiversity by 2015. The Summit promises a better future for the earth but the true tests of achievements are the actions taken afterward (United Nations Department of Economic and Social Affairs 2002).

The debate on environmental issues and commitment at the global arena trickles down to the national level. This paper therefore aims to discuss the Malaysian scenario regarding environmental commitment and citizen participation, with particular focus on the potential of environmental literacy in promoting actions. The challenges and opportunities in doing so will also be discussed.

ENVIRONMENTAL COMMITMENT - THE MALAYSIAN SCENARIO

Issues and problems pertaining to the environment are not new in Malaysia. Problems regarding ineffective effluent disposal from mining activities and conflict of interest between agriculture and wildlife protection were some of the issues that had been drawn out way back in 1920's. In those days, the interest in environmental quality was only confined to a small number of government officials, academics and special interest groups. Environmental awareness was just emerging in the Peninsular Malaysia and it was the responsibility of the government to bear the environmental protection. The mass of the society holds the feelings that environmental protection is a luxury and might hinder the development process.

Aiken *et al.* (1982) in their work to draw together the multifarious environmental consequences of man's activities in this country stated that the relationship between environment and development is further complicated by rural and urban poverty and by the general absence of environmental awareness. He further stated that, 'Poverty gives rise to its own environmental problems,

such as faecal contamination of rivers, ponds, and wells, and the generally poor living conditions that are experienced in urban squatter settlements and slums. To those who are poor, what is a bit of landscape, a wild river, or a country's wildlife when its destruction may mean the betterment of their life, even if only for a short period of time?"

Ever since independence in 1957, Malaysia had been developing rapidly. Development will certainly bring about environmental degradation. As such, the conflict between the environment and development had always been a matter of concern. But that is not an excuse to not to develop the country. Neither can it be an excuse to simply give way to development without considering the well being of the environment. Rather, it should be treated as a challenge in striking the right balance between development and minimizing the damage to the environment. Malaysia had shown serious commitment towards this end since the period of The Third Malaysia Plan (1976 - 1980). The successive Malaysia Plans also addressed the environmental issues accordingly under an allotted chapter.

The Seventh Malaysia Plan (1996 - 2000) asserts Malaysia's commitment towards enhancing environmental awareness among the population so as to promote an environmental friendly lifestyle and consumption habit. The Plan stated that: 'The relevant ministries will develop policies, strategies and programs on environmental education, awareness and training. The imparting of knowledge and instilling of awareness is expected to help Malaysians adopt a more environment-friendly lifestyle and consumption habit. Environmental ethics and a sense of responsibility will be inculcated, and the population will be encouraged to take an active role in the protection and maintenance of the environment. The private sector, non-governmental organizations, and the media will be encouraged to play a bigger role to complement the Government's efforts in this endeavor.'

The Seventh Malaysia Plan also proposed the National Policy on the Environment which aims at promoting economic, social and cultural progress through environmentally sound and sustainable development. The National Policy on the Environment was approved by the Malaysian Cabinet in the period of The Eighth Malaysia Plan, i.e. on the October 2002 (Ministry of Science, Technology & Environment, Malaysia 2002). The objectives of the policy are as stated below:

- (a) To achieve a clean, safe, healthy and productive environment for both the present and future generations.
- (b) To conserve the country's unique natural resources and diverse cultural heritage with effective participation by all.

- (c) To promote lifestyles and patterns of consumption and production consistent with the principles of sustainable development.

The essence of the policy was based on seven interrelated and mutually supporting principles. The principles are stewardship of the environment, conservation of nature's vitality and diversity, continuous improvement in the quality of the environment, sustainable use of natural resources, integrated decision-making, strengthening the role of private sector, commitment and accountability, and active participation in the international community. The policy and vision statement calls for broad participation by all citizens at all levels and emphasis on the partnership between relevant bodies. The National Policy on the Environment is in line with Vision 2020, i.e. Malaysian vision towards attaining a developed-nation status by the year 2020. One of the nine challenges underlined in Vision 2020 refers to the establishment of a fully moral and ethical society; where every individual subscribes to the need to keep the land productive and fertile, the atmosphere clear and clean, the water unpolluted, the forest resources capable to regeneration and able to yield the needs of the nation.

Malaysia's serious commitment with regard to environmental issues is also illustrated in the establishment of related laws and regulations. In the early years after independence, environmental problems were considered less important compared to the development priorities. The available laws and regulations pertaining to environmental protection were inadequate and sectoral in character, focusing only on specific areas of activities such as mining, forestry and irrigation. The first attempt to a more comprehensive legislation in environmental protection was brought about by the establishment of the Environmental Quality Act (EQA) in 1974. The EQA had been amended twice i.e. in 1985 and 1996. These amendments were due to the environment and development needs and also to cater for the new and emerging environmental problems. Rules and regulations are not the only means in dealing with environmental problems. The present approach in environmental management is now changing from the curative method by ways of strict rules and regulations, to the preventive method which emphasis on voluntary actions through implementation of environmental standards (Sham Sani 1997). This calls for a strong environmental awareness among individual players in the environmental sectors and also the public at large. Thus, it brings about the importance of promoting environmental literacy.

ENVIRONMENTAL LITERACY: THE IDEALS VS THE REALITY

Environmental literacy refers to the specific literacy that promotes responsible environmental behavior. Theoretically speaking, environmental literacy operates in a continuum, beginning with awareness and concern of an issue, understanding of the issue and finally taking appropriate action. The continuum can be divided into three levels namely the nominal environmental literacy, functional environmental literacy and operational environmental literacy (Moseley 2000). Nominal environmental literacy is characterised by knowing the specific terms and understanding of their meanings. At this stage, one does not fully understand the various aspects of an environmental issue. The functional environmental literacy refers to the ability to use the basic knowledge and concepts, could think critically and able to discuss or explain the issue to a third person either orally or in writing. Finally, at the operational literacy stage, a person should be able to collect, interpret and analyse various factors regarding the issue involved and could make decision from the various alternatives.

To illustrate the meaning of environmental literacy continuum, take the case of pollution by motor vehicles as an example. At the first stage of the continuum, one should realise that motor vehicles could contribute to air pollution through emission of gaseous pollutants. Next, he must understand the various types of pollutants and the mechanism in which these pollutants react and how they affect human and also environmental health. He must also be able to explain the issue to another person. Finally, the person must be able to take the right actions that result in reducing the pollution such as using only unleaded petrol, making sure that his car is regularly maintained so that the engine stays in good condition, or even opt for car pooling or public transportation.

From the above given example, we can say that the distinguishing character of environmental literacy is the 'action' perspective, which refers to the highest level of the continuum i.e. operational environmental literacy. This is crucial since the true indicator of environmental commitment is the actions taken by individuals, community and society. The premise here is that, environmental literate society will be more committed to environmental friendly behavior and hence contribute to a better environment. What about the situation in Malaysia? Has Malaysian society reach the standard of an environmental literate society? We'll go on to look into the current situation in Malaysia by discussing some of the research findings pertaining to the issue. These studies might not be complete, scattered in nature, differs in objectives and not exhaustive in findings, but it could somehow give a rough idea on the subject.

One of the early studies to assess the level of environmental awareness among the general public was done in 1986. The study was conducted by the Department of Environment and Frank & Small Associates. The findings were rather unimpressive - environmental pollution was ranked at seven out of eight items of important public issues, and only 46% of the respondents know the actual meaning of the words 'environmental pollution' and 'air pollution'. Most of the respondents that more involved in pollution episodes at their dwellings preferred not to take any action (64%). The willingness to pay for pollution prevention was found to be very low, where 85% disagree to pay any extra costs to the present expenses. However, most of the respondents are willing to spend their time in environmental projects (Department of Environment 1986).

In 1996, Department of Environment conducted another study. The survey revealed that almost 90% of Malaysians are aware of environmental issues and their impacts, and 80% of respondents were concerned with the environmental impacts on the economy and majority would prefer stricter environmental control. Furthermore, it was established that the print and electronic media played a key role in creating environmental awareness in Malaysia (Department of Environment 1997). A study carried out by Malaysian Science & Technology Information Centre (MASTIC) in 1998 is also relevant in this discussion. The results showed that environmental pollution was first in the list of science and technology issues known to the public. The respondents were more aware of the environmental issues that are near to them, such as haze, flash flood and hazardous waste dumping compared to issues like ozone depletion, acid rain and global warming. The respondents also agreed that they gain most of the environmental information from the electronic and print media such as television, magazines and newspapers (MASTIC 1998).

In a more recent event, the statement by the CEO of Alam Flora Sdn. Bhd. regarding poor waste management in Malaysia might relate to this issue. He commented on the behavior of the society in managing domestic waste and the pitiable response to recycling effort by the local authorities (Massa, February 2003). The same reaction was also expressed by the Deputy Prime Minister regarding the slipshod maintenance culture in Malaysian society - from public toilets to government offices to museums and airports (New Sunday Times, 28 Sept. 2003). These problems connect to the attitude and behavior, or simply put in the 'action' perspective. Relating to the environmental literacy continuum, we can suggest that our society might have reached the nominal and functional level but still a long way to go reach the operational stage.



THE WAY FORWARD - OPPORTUNITIES & CHALLENGES

A promising way in achieving an environmental literate society is through education. Thus environmental education should be geared up to achieve this objective. Environmental education should ideally present the audience with not only the knowledge but also the skills needed in tackling current environmental problems and preventing the emerging of new ones. Environmental education should be a life long process and not only confined to the formal education system but should also extend to the mass of the society through informal ways. The formal and informal education systems should go hand in hand and complement each other in the quest for an environmental literate society. This is in line with Malaysia's Green Strategy in implementing the National Policy on the Environment. The following discussion will focus on the opportunities and challenges in the implementation of environmental education in Malaysia towards building an environmental literate society.

The formal and informal education system

In the current education system, environmental education is being taught at the school level by integrating it in other subjects such as Science and Geography. The problem with this approach is that environmental education seems to look peripheral compared to other subjects. A more practical and effective way in strengthening environmental knowledge in school system is by teaching it as a single subject. Teaching environmental education as a single subject can be done by integrating three approaches suggested by Tilbury (1995). Each of these approaches has distinct objectives. The approaches are education about/in/for the environment. Education about the environment concerns about developing awareness, knowledge and understanding about the human-environment interactions. This approach is informative in nature and frequents the science and geography curricula. Education about the environment uses the environment as a topic or theme of study. The next approach is education in the environment. This approach involves pupil-centred and activity-based learning. It usually takes the form of outdoor education and fieldwork and provides students with direct contact with the environment. The final approach, that is education for the environment features a more holistic and interdisciplinary approach. It goes beyond the limitation of just understanding, appreciation and concern but rather emphasise on the development of sense of responsibility and active participation. It adopts an issue-based pedagogy and acknowledges the political elements that underpin any study of the environmental situation.

The informal education system is also important, especially in its potential to reach out for the general public or the society at large. The most effective way in disseminating knowledge to a larger audience is through mass media. As has been said earlier, mass media especially the electronic and print media plays an integral part as sources of information. Therefore, the mass media should step up their effort in enhancing public awareness of environmental issues.

Environmental education should be taken more seriously, especially in to promoting good values among the citizen of the country. The idea brought forward by O' Riordon (1981) might be used as the foundation for environmental education. He suggested that environmental education is similar to citizenship education in which both intend to build commitment and social responsibility based on the holistic view on the relationship of man and his environment. Citizenship involves elements of status and feelings. Three elements are necessary for citizenship namely a sense of belonging, the capacity to gain access, and the ability to participate. All three are closely related and interdependent. The first element concerned with the shared values while the second and the third are related to attitudes, skills, knowledge and understanding. Citizenship education explains why society can only work to the benefit of everybody if all its members act with consideration towards others. This is where environmental education complements with citizenship education - that all man shares the same environment that is globally interconnected, therefore we are all dependent upon one another.

Environmental education and ethics

Another promising way in nurturing environmental literacy is through ethics and religious teachings. These spiritual beliefs serve as strong guiding principles in leading one's life. It is also considered as one of the strong attitude determinant towards behaviour, as stated by Brehm & Kassin (1996). In the case of Malaysia, we are blessed with a harmony multiracial society. Tolerance and understanding between different racial and cultural background should be extended in all aspects of life including the relationship with the environment.

Most of the religious teachings point out that man is an integral part of nature and that there should be harmony between man and nature. For example, in Islam, man is seen as a vicegerent or *khalifah* of Allah s.w.t. on earth. Thus man has the role of a steward to manage the earth with both responsibility and accountability. There are four main principles governed the environmental ethics in Islam (Manzoor 1988):

- (a) *Tawhid* - This is a paramount concept in Islam which demands the relationship with the Only One i.e. Allah that excludes a similar relationship with anyone else. Whatever a Muslim does should be guided by this principle. Man should be responsible to whatever he does and he'll be answerable to Allah.
- (b) *Khalifa* and *amana* (stewardship and trust) - Nature is created in an orderly and knowable manner to be understood and serves as a trust from Allah to man. Man is to read the signs in nature in order to better understand the teachings in the Qur'an and Sunnah. Besides that, nature serves as a testing ground for human to fulfill their responsibility towards Islamic teachings.
- (c) *Sharia* (the ethics of action) - *Sharia* brings the whole spectrum of human life under the jurisdiction of absolute moral judgement because it is firmly anchorage in the revelation of God - the source of all good and the goal of every human endeavor.
- (d) *Adl* and *I'tidal* (justice and moderation) - Justice and moderation is also synonymous with order and equilibrium and this is manifested in the harmony and balance of the universe.

For the Christians, the Bible also stated that human occupies a special position in creation and that human being has dominion over nature. The earth belongs to God and it also belongs to man because God had given it to man. However, man is not the sole proprietor. Instead, man is only given stewardship of the earth, to rule over it on behalf of God in whose image man had been created. The Christians believes that man is the favored tenant of the earth while God remains the landlord. Another religion that believe in an Absolute Being (in this case it is not a supreme Creator God) is Hinduism. For the Hindus, the ultimate reality is the Brahman. Brahman is also believe to be the soul or inner existence of all things. Hindus believe in the spirit of all things and there exist inseparable bond between humanity and nature and thus relationship of violence and abuse cannot be a spiritually harmonious basis of human conduct with the environment (Tong Veng Wye 1991).

Buddha's guidance essentially directs the believers towards enlightenment on human suffering and its origin, the possible cessation of that suffering and the path towards the cessation. The path of Buddhism focuses on the need for personal and spiritual self-development through right modes of living. The Buddhist holds on to the doctrine of *an-atta* which says that nothing in existence has within it a permanent 'soul' or imperishable entity which distinguishes it from other forms of life. This implies that the unity of all things is fundamental and the relationship between human and nature is inseparable.



The above brief notes on the various religious beliefs in Malaysia shows the spiritual link with the environment. Hence, there lies the potential to tap these beliefs and inculcate it in the daily lives of their respective believers.

Environmental education and the changing of attitude

Environmental education should lead to a change of attitude towards a more environmental friendly manner. This might involve the change of lifestyle. The most common approach to changing attitudes is persuasive communication (Brehm & Kassir 1995). Attitude change is greater for messages delivered by a source that is high rather than low in credibility. Attitude change is also greater when the source is high rather than low in likability. Example of these is clearly illustrated in school children - they are prone to oblige to what their teacher says. They will not throw rubbish everywhere and do not waste their food because the teacher says that those actions are not good. Teachers as role models make it easier for the children to be obedient.

Another important element in changing attitudes regarding environmental issues is avoiding the psychology of despair. This refers to the scenario where individuals feel that their personal actions could not do anything to save the world (Hicks & Holden 1995, Hudson 2001). This notion is due to the nature of environmental problems that is complicated in nature. To avoid this, educators should focus more on the issues that are near to the audience or students, for instance air pollution in the area and not the issues on ozone depletion at the global scale.

As been mentioned earlier, issues that are nearer and dearer to our hearts contribute towards a stronger attitude. And that stronger attitude is also being determined by the method of acquisition of the knowledge. These facts could be manipulated in environmental education by promoting direct exposure to the environment through field works and community participation. The same facts could be adopted in education by means of the mass media, be it printed or electronic. For instance, television programs such as National Geographic could be used as an alternative to direct contact with the environment. By exploring nature and understanding it, one could develop a sense of belonging to the environment. The impact might be less compared to direct exposure, but it is still worth considering. This is very much relevant in today's life, since many young people spend most of their time in front of the television sets!

Above are just some of the many ways that could be adopted in promoting environmental literacy among the society. Whatever it is, it is up to the relevant individuals and organization to choose the right method that is suitable to the audience and point of time.

CONCLUDING REMARKS

Individuals as members of a larger group should realize their respective roles towards contributing to an environmentally literate society. Therefore, it is essential that every individual is equipped with the proper knowledge and skills that will guide them in making the right decisions in every day life. In the end it is the individual that is responsible in determining their actions towards other fellow humans and the environment. I would like to end this paper with something to ponder from O' Riordan's book titled *Environmentalism* (1981):

They tell a story of a man who asked a socially conscious friend: "If you had two houses, what would you do with them?" "Keep one and give the other to the State", the friend replied. "If you have two cows what would you do with them?", the first man asked. "Keep one and give the other to the State", the friend replied. "If you have two chickens, what would you do with them?", the first man persisted. "Keep them both", the friend replied. "Why?", the first man asked. "Because I *have* two chickens", the friend replied.

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